

**commodore**  
Electronic Calculators

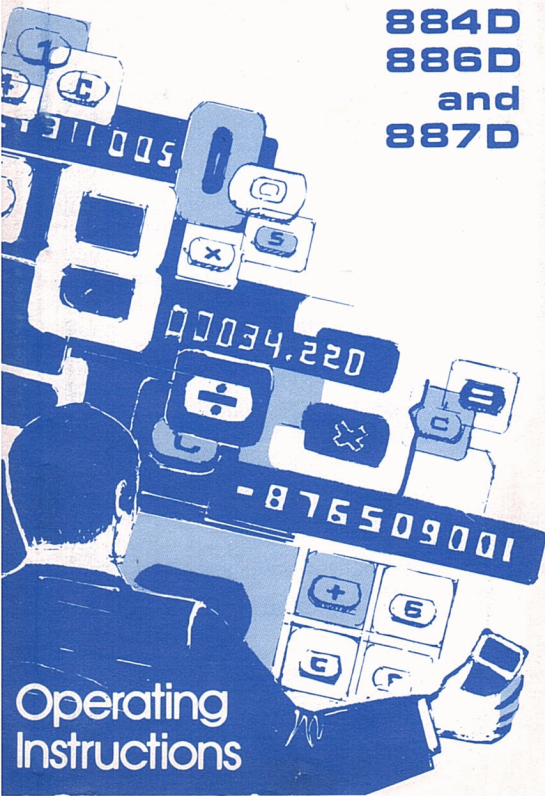
**Models**

**884D**

**886D**

**and**

**887D**



**Operating  
Instructions**

# Introduction

Congratulations on your purchase of your new Portable Electronic Calculator. You have selected one of the finest, precision-built figuring instruments. It is capable of performing a wide range of problem-solving applications . . . simply . . . easily . . . instantly.

A tiny, solid state chip of silicon, no bigger than this letter "M," contains the brainpower for your calculator. Engineers refer to this miracle of super miniature wizardry as, "Large Scale Integration," (LSI). It is your assurance of optimum reliability and increased durability.

Your new calculator adds, subtracts, multiplies, divides and performs a number of advanced assignments. The unit shows answers accurate to the decimal and displays credit balance results automatically.

Please review the instructions in this booklet. Work through the examples illustrated, and within a very short time you will become proficient in the many advantages offered by your new calculator.

# Preliminary Instructions

**+ - × ÷**

The number of functions which your machine has tells you what it is able to do. For example, the Model 884D is a four function calculator. This means it can add, subtract, multiply and divide. It can also do all of these operations in one example which we will illustrate later on.

The keys, Add (+), Subtract (−), Multiply (×), and Divide (÷) each command the calculator to perform its particular function when it is pressed.

## **Some operating ground rules:**

### **How your calculator thinks —**

Your calculator thinks with "People Logic." Engineers refer to it as "Algebraic Logic." This simply means that your machine accepts examples in the very same sequence you would write them down on paper and that is common-sense "People Logic." For example, 123 divided by 17 should be entered as follows:

1 2 3 ÷ 1 7 =

Display Reads 7.2352941

## **The floating decimal**

A floating decimal is one that automatically "floats" into its proper position. If, in the above example, we were dividing one hundred and twenty three dollars among seventeen people, each would have received \$7.24. Notice how we "round up" the number because cents is measured only in two places to the right of the decimal. Since the third place was a 5 we increased, or rounded up, the number immediately to its left.

The additional numbers are, of course, not meaningless. If we were dealing in precise measurements, the larger number would permit greater accuracy. Thus, your calculator serves many figuring needs.

**A practical explanation of all we have been speaking about is found in the following example.**

A student is asked to record winter temperatures each day for one week and determine the average daily temperature for the coming month.

The example requires

1. Add temperature for 7 days
2. Multiply total by 4 (4 weeks)
3. Divide by 28 (days) for the projected daily average temperature.



His readings are: Monday  $40^{\circ}$ , Tuesday  $22^{\circ}$ , Wednesday  $31^{\circ}$ , Thursday  $18^{\circ}$ , Friday  $-6^{\circ}$ , Saturday  $-2^{\circ}$ , Sunday  $16^{\circ}$ .

To handle this problem on your calculator

Press		Read
a. 40		40.
b. +		40.
c. 22		22.
d. +	(Note: Subtotal displayed)	62.
e. 31		31.
f. +		93.
g. 18		18.
h. -		111.
i. 6		- 6.
j. -		105.
k. 2		- 2.
l. +		103.
m. 16		16.
n. X	(Read subtotal and prepare machine for multiplication)	119.
o. 4		4.
p. ÷	(Read subtotal and prepare machine for division)	476.
q. 28		28.
r. =		17.

Therefore, the average daily temperature during the projected 4 week period will be  $17^{\circ}$ .

## Clearing and Erasing

The "C" key on your machine is the CLEAR KEY and serves two important functions. If pressed twice, it clears the entire machine to prepare it for a new example.

If, during an example, you have entered an incorrect number, you may "erase" that entry by pressing the "C" key once immediately after the error is made. This enables you to insert the correct number without beginning all over again.

### To clear an incorrect entry

Example:  $48 + 12$  is your calculation

- A. You have already entered 48

Display is:

48.

- B. You now touch the + key.

Display will be:

48.

- C. Then you enter 13 by mistake.

13.

The display is:

A mistake!

- D. To clear 13, touch the C key.

Display will be:

0.

Note: Use C during, or immediately after entry of a number.

E. Then enter '12'.

Display will be:

12.

F. Finally, touch the =K key for answer

Display will be:

60.

## The Equal Key

The result key (=) is pressed at the conclusion of an example to reveal the final result. The = key is a double function key since it also stores an automatic constant. This is especially useful during certain multiplication and division examples. However, it is important to note that if after you have computed a result by pressing the = key once, care should be taken not to inadvertently touch the = key a second time as your answer will be changed.

## Overflow Interpretation

The overflow indicator "E" will appear when the Display capacity of the calculator is exceeded.

The overflow is cleared by dividing by 10 enough times to bring the decimal point into the Display. Calculations may now continue noting the result must be multiplied by  $10^N$ , where N is the number of times you divided to recapture the decimal. Maximum capacity is  $10^{48}$ .

# Calculations

## Addition

Example:  $16.39 + 9.83 = 26.22$

Press	Read
a. <b>CC</b> (Press Clear Key Twice)	0.
b. <b>16.39 +</b>	16.39
c. <b>9.83</b>	9.83
d. <b>=</b>	26.22

## Subtraction

Example:  $12.81 - 3.6 = 9.21$

Press	Read
a. <b>CC</b>	0.
b. <b>12.81 -</b>	12.81
c. <b>3.6</b>	- 3.6
d. <b>=</b>	9.21

The constant feature of your calculator is automatic and especially useful.

## Constant Multiplication

Example:  $22 \times 22 = 484$ ,

$$22 \times 7 = 154,$$

$$22 \times 34 = 748$$

Press	Read
a. <b>CC</b>	0.
b. <b>22</b> $\times$	22.
c. <b>=</b>	484.
d. <b>7</b>	7.
e. <b>=</b>	154.
f. <b>34</b>	34.
g. <b>=</b>	748.

## Constant Division

Example:  $-8 \div 3 \div 3 = -0.8888888$

Press	Read
a. <b>CC</b>	0.
b. <b>- 8</b>	-8.
c. <b><math>\div</math></b>	-8.
d. <b>3</b>	3.
e. <b>=</b>	-2.6666666
f. <b>=</b>	-0.8888888

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Santa Clara, California 95050

## **Commodore Business Machines, (Canada) Ltd.**

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CH-5000 Aarau, Switzerland

# Guarantee Registration Card

Please complete this form and mail in envelope today to the office nearest you.

Your name \_\_\_\_\_

Company name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Model Designation \_\_\_\_\_

Serial Number \_\_\_\_\_

Name of Retailer \_\_\_\_\_

Address \_\_\_\_\_

Date of Purchase \_\_\_\_\_

## Raising a Number to a Power

Example:  $11^3 = 1331$

Press	Read
a. <b>CC</b>	0.
b. <b>11</b> $\times$	11.
c. <b>=</b>	121.
d. <b>=</b>	1331.

## Models 886D and 887D

<b>%</b>	<b>Percent Key:</b>	Commands calculator to set up decimally correct percentage answer, and prepares for mark-up or discount calculations.
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### Percent

Example:  $5\% \text{ of } 220 = 11$

Press	Read
a. <b>CC</b>	0.
b. <b>220</b> $\times$	220.
c. <b>5</b>	5.
d. <b>%</b>	0.05
e. <b>=</b>	11.



## Percent Add on

Example:  $(430 + 20) + 5\% \text{ tax} = 472.5$

Press		Read
a. CC		0.
b. 430 +		430.
c. 20		20.
d. +	principal	450.
e. 5		5.
f. %	tax	22.5
g. =	total	472.5

## Percent Discount

Example:  $(600 + 50) - 10\% \text{ discount} = 585$

Press		Read
a. CC		0.
b. 600 +		600.
c. 50		50.
d. -	principal	650.
e. 10		-10.
f. %	discount	-65.
g. =	total	585.

**EX**    **Exchange**    Reverses role of factors  
         **Key:**            as follows:

$A \times B$  EX (machine will now perform  $B \times A$ )

$A \div B$  EX (machine will now perform  $B \div A$ )

$A + B$  EX (machine will now perform  $B + A$ )

$A - B$  EX (machine will now perform  $B - A$ )

## **Model 887D**

### **Memory**

**MR**    **Key**            **Memory Recall.**  
                             Displays contents of memory  
                             without clearing or disturbing  
                             memory accumulation.

**MT**    **Key**            **Memory Total.**  
                             Totals and displays all figures  
                             in Memory. Automatically  
                             clears memory register.

**M+**    **Key**            **Memory Plus.**  
                             Adds figures in display to  
                             Memory.

**M-**    **Key**            **Memory Minus.**  
                             Subtracts figures in display  
                             from Memory.

**MC**    **Key**            **Clears all numbers from the**  
                             **Memory.**

**Memory in**            **When the Memory is in use a**  
**Use Indicator:**       **decimal point will appear in**  
                             **the left-most digit space.**

**Example:**  $- 8 + (15 \times 3) - (20 \div 5) = 33$

Press	Read
a. MC CC	0.
b. 8	8.
c. M -	8.
d. 15 X	15.
e. 3	3.
f. =	45.
g. M +	45.
h. 20 ÷	20.
i. 5	5.
j. =	4.
k. M -	4.
l. MT	33.

**Example:**  $\frac{50}{40 - (4 \times 8)} = 6.25$

Press	Read
a. MC CC	0.
b. 40	40.
c. M +	40.
d. 4 X	4.
e. 8	8.

f. =	.	32.
g. M -	.	32.
h. 50 ÷	.	50.
i. MR	.	8.
j. =	.	6.25

## Use of EX Key with Memory

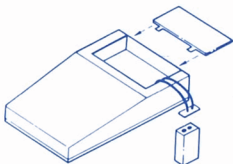
**Example:** What is the total interest and cost of a \$456 loan borrowed for 71 days at  $8\frac{1}{2}\%$  ?

Press		Read
a. MC CC		0.
b. 456		456.
c. M +	.	456.
d. X	.	456.
e. 71	.	71.
f. X	.	32376.
g. 8.5	.	8.5
h. %	.	0.085
i. ÷	interest .	2751.96
j. 360	.	360.
k. + M +	.	7.6443333
l. MR	total cost of loan .	463.64433
m. EX	total interest .	7.6443333

# Power

## Disposable Battery Model (D)

Your calculator uses a standard nine-volt battery type 006P available at most drug, department and camera stores. To operate, disconnect the adaptor cord and turn power switch "ON" (an interlocking switch in the AC socket will prevent battery use if the plug remains connected). When the battery weakens, display will dim.



Experience has proven that batteries packed with machines age considerably. To protect your calculator, we have omitted the battery from the package. Please ask your dealer for a fresh, new power cell. In the event your brand new machine does not function, please check the battery first.

*Please note, machines with disposable batteries will not recharge. See battery replacement details above.*

## AC Adapter Operation

It is recommended that you unsnap and remove the battery from your machine before inserting the adapter jack.

# Guarantee

Your new electronic calculator carries a parts and labor guarantee for one year from date of purchase.

We reserve the right to repair a damaged component, replace it entirely, or, if necessary, exchange your machine.

If you own a portable calculator which uses an AC adapter, the adapter must be returned with your machine when service is required.

In order to receive free service under this guarantee at a Commodore Service Center, you are required to pay all postage, shipping and insurance charges when returning your calculator to the Commodore Service Center and enclose a check or money order for \$2.50 to cover handling charge, return postage and insurance.

This guarantee is valid only when a copy of your original sales slip or similar proof of purchase accompanies your defective machine.

This guarantee applies only to the original owner. It does not cover damage or malfunctions resulting from fire, accident, neglect, abuse or other causes beyond our control.

The guarantee does not cover the repair or replacement of plastic housings or transformers damaged by the use of improper voltage. Nor does it cover the replacement of expendable accessories and disposable batteries.

The guarantee will also be automatically voided if your machine is repaired or tampered with by any unauthorized person or agency.

In order to record your guarantee you must complete the registration card and mail it within ten days from date of purchase.

This guarantee supersedes, and is in lieu of, all other guarantees whether expressed, or implied.